DOCUMENT RESUME

ED 311 831 HE 022 924

AUTHOR	Schmitt, Carl
TITLE	Changes in Educational Attainment: A Comparison among 1972, 1980, and 1982 High School Seniors. Survey Report.
INSTITUTION	National Center for Education Statistics (ED), Washington, DC.
REPORT NO	CS-89-413
PUB DATE	Apr 89
NOTE	34p.; Data Series: HS&B So 80/86; NLS-72/86.
PUB TYPE	Reports - Research/Technical (143) -- Statistical Data (110)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	Academic Ability; *Degrees (Academic); *Educational Attainment; *Educational Trends; Ethnic Groups; Females; High Schools; Institutional Characteristics; Males; Minority Groups; National Surveys; Postsecondary Education; Socioeconomic Status; *Student Characteristics; Trend Analysis
IDENTIFIERS	High School and Beyond (NCES); *National Longitudinal Study High School Class 1972

ABSTRACT

Data from the National Longitudinal Study of the High School Class of 1972 and both cohorts of the 1980 High School and Beyond study were used to analyze trends in postsecondary educational attainment since 1972. The report contains information on educational attainment beyond high school and group differences by sex, high school type, race or ethnic group, socioeconomic status, and ability quartile. Highlights include the following: overall postsecondary attainment declined for the 1980 and 1982 high school seniors, relative to 1972 seniors. Half of the 1972 class, one-quarter of the 1980 class, and one-fifth of the 1982 class attained a postsecondary diploma, certificate, or degree within 4 years of leaving high school. About three-fifths of the 1972 class and two-fifths of the 1980 class attained a diploma within 6 years of leaving high school. Most students earning diplomas did so within the first 7 years after high school. Male 1972 seniors were more likely than females to attain a diploma, and male 1980 and 1982 seniors were less likely to attain a diploma within 4 or 6 years. Private school students were more likely to attain some postsecondary diploma, certificate, or degree, than public school counterparts. (MSE)

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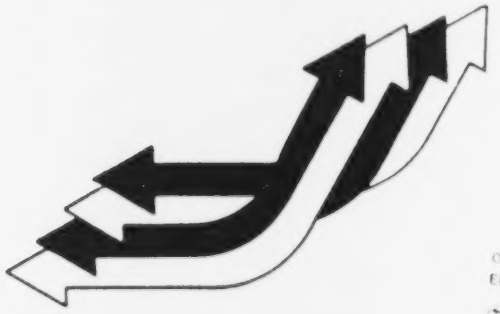
NATIONAL CENTER FOR EDUCATION STATISTICS

Survey Report

April 1989

Changes in Educational Attainment: A Comparison Among 1972, 1980, and 1982 High School Seniors

Carl Schmitt
Postsecondary Education Statistics Division



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Highlights

- The overall level of postsecondary degree attainment declined for the 1980 and 1982 high school seniors, relative to the 1972 seniors.
- Half of the 1972 high school senior class, one-quarter of the 1980 senior class and one-fifth of the 1982 senior class attained a postsecondary diploma, certificate, or degree within 4 years after leaving high school.
- About three-fifths of the 1972 high school senior class and approximately two-fifths of the 1980 senior class attained a postsecondary diploma, certificate, or degree within 6 years after leaving high school.
- Most students who earned degrees did so within the first 7 years after high school.
- Males in the 1972 senior class were more likely than females to attain a postsecondary diploma within 4, 6, even 14 years after leaving high school.
- Male members of the 1980 and 1982 senior classes were less likely than their female counterparts to obtain a postsecondary diploma 4 or 6 years after leaving high school.
- Private high school students were more likely to attain some postsecondary diploma, certificate, or degree than their counterparts from public high schools.

Foreword

The National Center for Education Statistics, with support from other government agencies, has sponsored three longitudinal studies of U.S. students: The National Longitudinal study of the High School Class of 1972 (NLS-72), High School and Beyond, which included both the 1980 sophomore and senior students, and the National Educational Longitudinal Study of 1988, involving eighth grade students. All of these longitudinal studies have had multiple data collection components.

This report is based on data from the NLS-72 and both cohorts of the High School and Beyond study. Only those 1980 sophomores who were seniors in 1982 were included. This report shows the level of degree attainment by the three cohorts of students and various subgroups within each cohort, and enables comparison between them.

The data analyzed for this report are available for secondary analysis on either mainframe of micro computer. Information about obtaining the data series used for this analysis or data related to other longitudinal studies conducted by the Center is available from the U.S. Department of Education, Office of Educational Research and Improvement, Information Technology Branch, 555 New Jersey Avenue NW, Room 214A, Capitol Place Building, Washington DC 20208-5725, or 1-800-424-1616.

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Acknowledgments

This report has been reviewed by Charles Cowan, C. Dennis Carrol, Curtis Baker, Ralph Lee, and Samuel Peng of the National Center for Education Statistics. It has also been reviewed by Moira McGlaughlin of the Office of Planning, Budget, and Evaluation (OPBE), and Janet Hansen of the College Entrance Examination Board (CEEB). While the reviewers were helpful, the author is solely responsible for errors, misconceptions, and misjudgments.

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Education Attainment

This report presents findings on education attainment from the National Longitudinal Study of the High School class of 1972 (NLS-72) and the High School and Beyond (HS&B) study supported by the National Center for Education Statistics (NCES). Education attainment is an issue that has long been of wide concern since it is one of the most highly placed values in American society. Education is considered to be a means for individuals to obtain occupational and economic success. Education also produces the necessary bases by which the society can remain viable in the competition among nations. At both individual and societal levels, education represents a means for attaining valued goals.

Although efforts to increase the overall education level of the population have long been instituted, considerable concern remains that attainment is lagging. Studies of education attainment have focused on the attainment of the bachelor's degree (Eckland, B.K., and Henderson, L.D., 1981), entry into postsecondary education, years of schooling (Kerckhoff, 1980) enrollment and persistence in postsecondary institutions (Eagle, E., et al., 1988) and "dropouts" (Bayer, S.E., 1968: 186-192). These studies explored the impact that gender, social class, and race, have on the amount of education obtained. Prior research pertinent to educational attainment observed "measured ability" to be a primary influence (Wise, L., and Steel, L., 1980), along with type of high school.

This study reports on degree attainment [1] as a significant dimension of education attainment. Degree attainment indicates that the individual is officially certified and labeled as having attained a specified amount of education. The degree is a credential and is frequently accepted as an indicator of skill and knowledge. This study describes changes in degree attainment that have taken place among three groups of students: the NLS-72 high school senior and the 1980 high school seniors and sophomores.

The data for this study were taken for the National Longitudinal Study of the high school class of 1972 (NLS-72) and the High School and Beyond (HS&B) study of 1980 and 1982 high school seniors. The NLS-72 study follows the high school class of 1972 and the HS&B study follows the activities of the high school classes of 1980 and 1982. Both studies permit analysis of trends relevant to educational and career development and a range of life-cycle factors, such as family formation. The NLS-72 study collected base-year data in 1972 and followup at five subsequent time points: 1973, 1974, 1976, 1979, and 1986. The HS&B study collected base-year data from seniors and sophomores in 1980 and followup data in 1982, 1984, and 1986. Data from the base year and all followups were used for this analysis. The 1980 sophomores who

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[1] This study of education attainment is based on data from three cohorts of students followed longitudinally. The rates calculated reflect the experiences of the respective cohort members who may be considered "traditional students." The total number of degrees granted by institutions is generally rising. This is due to the inclusion of "non-traditional students" (i.e., older persons who have been away from school for extended periods of time). Degree attainment, as applied in this report, was constructed from student responses to questions in the followup surveys regarding educational experiences. Attainment was defined in terms of requirements for a diploma, certificate, or degree that had been completed. Students who have completed years of schooling just short of attaining a degree or beyond the degree were not included.

dropped out of high school prior to their senior year were not included in this analysis,[2] thus making the analyzed populations comparable. This cohort is referred to as the senior cohort of 1982 in this analysis.

The timing of the administration of the surveys must be taken into account in order to properly interpret the findings on the degree attainment after high school. The time of year that data collection for the NLS-72 and the HS&B studies was undertaken does not correspond directly. The HS&B surveys were administered between February and July, prior to the completions of the fourth and sixth academic years. Thus, the HS&B 1980 and 1982 seniors were surveyed 3 1/2 and 5 1/2 years after high school while the NLS-72 seniors were surveyed 4 1/2 and 7 1/2 years after high school. The NLS-72 surveys were administered between October and May after the fourth and the seventh academic years. [3]

Educational Degree Attainment -- High School and After

Overall, the level of education degree attainment by the HS&B 1980 and 1982 seniors declined relative to the NLS-72 seniors, although the patterns of attainment are similar. For a large percentage of the students, the high school diploma is the highest educational certificate obtained. Those who earned postsecondary credentials were likely to earn them within 7 years after high school.

Four years after high school, less than half of the 1972 seniors attained a postsecondary diploma, certificate, or degree (table 1). A smaller percentage of the HS&B 1980 and 1982 seniors received a postsecondary diploma, certificate, or degree (23.6 percent and 18.8 percent, respectively) within 4 years. The percentage with a postsecondary degree increased between the fourth and seventh years after high school to 58.2 for the NLS-72 seniors and 37.3 for the HS&B seniors. However, by 6 years after high school the 37.3 percent of the HS&B cohort who completed a postsecondary diploma was considerably fewer than the 45 percent of the NLS-72 seniors who completed some postsecondary diploma within 4 years after high school. Between 7 and 14 years after high school, the rate slowed for the NLS-72 cohort (from 58.2 percent to 60 percent).

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[2] Approximately 2,289 students were identified as having dropped out of high school between the sophomore and the senior year.

[3] More detail on the timing of survey administration is given in the technical notes.

Table 1.--Percentage of NLS-72 seniors, HS&B seniors, and HS&B sophomores obtaining some postsecondary diploma after high school

Years after high school	NLS-72 seniors	HS&B 1980 seniors	HS&B 1982 seniors
4 years	45.0	23.6	18.8
6 - 7 years	58.2	37.3	
14 years	60.0		

Education Attainment Four Years After High School

Table 2 shows the level of education attainment after high school for the NLS-72 at three points in time; for the HS&B seniors, at two points in time; and, for HS&B 1982 seniors, at one point in time. Less than 1 percent of students in each cohort had not yet completed the high school diploma within 4 years after their senior year. Slightly more than 15 percent of the NLS-72 seniors, and 7 percent of the HS&B 1980 and 1982 seniors, indicated they completed the requirements for the bachelor's degree within the initial 4 year period after high school. By 6 to 7 years after high school, nearly 25 percent of the NLS-72 seniors and 19 percent of the HS&B 1980 seniors completed the requirements of the bachelor's degree. By 14 years after high school, 22 percent of the NLS-72 seniors attained a bachelor's degree, 6 percent a master's degree, and 2 percent a Ph.d., LL.B., or M.D.[4]

[4]The declining level of degree attainment shown by the HS&B 1980 cohort relative to the NLS-72 seniors is surprising in many respects since the level of enrollment in postsecondary institutions has increased substantially. Other analyses have, however, shown that degree attainment by those enrolled has declined. These analyses have shown that persistence at postsecondary institutions has declined.

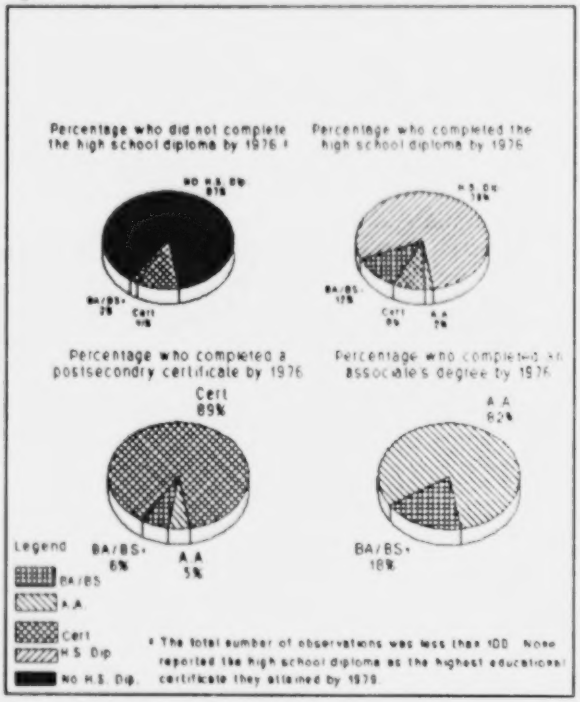
Table 2.--Percentage of NLS-72 seniors, HS&B 1980 and 1982 seniors who earned degrees after high school

Degree earned	NLS-72 seniors	HS&B 1980 senior	HS&B 1982 seniors
		Percent	
4 years after high school			
No H.S. Diploma	1	1	3
H.S. Diploma	53	75	78
Certificate	21	10	7
Associate's	9	6	5
B.A./B.S.+	15	7	7
6-7 years after high school			
No H.S. Diploma	1	1	
H.S. Diploma	41	62	
Certificate	24	12	
Associate's	10	6	
B.A./B.S.	22	18	
M.A.	3	1	
14 years after high school			
No H.S. Diploma	1		
H.S. Diploma	39		
Certificate	22		
Associate's	6		
B.A./B.S.	22		
M.A.	6		
Ph.d., LL.B., M.D.	2		

Educational Degrees Attained by NLS-72 and HS&B 1980 Seniors 5 - 7 Years After High School, by Degree Level Attained Within 4 Years

The majority of the students show considerable stabilization in their level of degree attainment within 4 years after high school. For those who attained additional education after the 4 year point, the degree attained within the first 4 years provided a foundation for subsequent attainment. These findings are summarized in figures 1 and 2. Figure 1 shows the level of degree attainment for the NLS-72 seniors in 1979 by four levels of attainment in 1976. Figure 2 shows the level of degree attainment for the HS&B 1980 seniors in 1986 by four levels of attainment in 1984.[5]

Figure 1.--Highest degree attained as of 1979 by 1972 seniors


Percentage who did not complete the high school diploma by 1976 *
Percentage who completed the high school diploma by 1976
Percentage who completed a postsecondry certificate by 1976
Percentage who completed an associate's degree by 1976
Cert 89%
A A 82%
BA/BS+ 6%
A A 5%
BA/BS+ 18%
Legend
BA/BS
A A
Cert
H.S. Dip
No H.S. Dip
* The total number of observations was less than 100. None reported the high school diploma as the highest educational certificate they attained by 1979.

Those who did not complete high school diploma within 4 years after high school.[6] The large majority of the NLS-72 seniors with no high school diploma in 1976 (87 percent) remain without a diploma in 1979. A similarly large majority of the 1980 HS&B seniors without a high school diploma in 1984 (75 percent) attained no additional degrees by 1986. Small percentages of these NLS-72 seniors completed requirements for a certificate and a bachelor's degree. Nearly 25 percent of the HS&B 1980 seniors with no high school diploma in 1984, however, attained their high school diploma by 1986 while less than 1 percent completed the requirements for a certificate by 1986.

Those who completed the high school diploma within 4 years after high school. Approximately three-quarters of the NLS-72 seniors who attained a high school diploma by 1976 completed no additional degrees by 1979. Two percent completed associate's degrees, 8 percent certificates, and 12 percent bachelor's degrees. Similarly, four-fifths of the HS&B seniors who completed the high school diploma by 1984, completed no additional degrees by 1986. Of the 1980 seniors with a high school diploma by 1984, 3 percent attained certificates, 1 percent

[5] It was not possible to do this analysis for the HS&B 1982 seniors since they were 4 years out of high school in 1986.

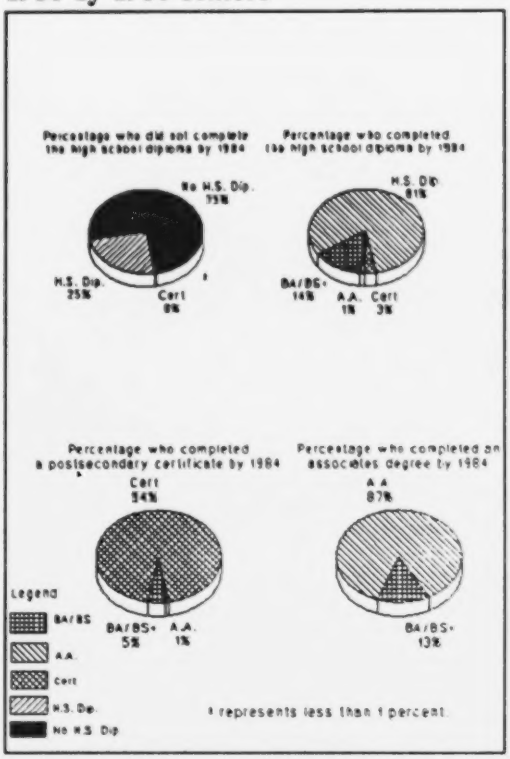
[6] Approximately 1 percent of the NLS-72 and the HS&B seniors did not attain the high school diploma within 4 years after leaving high school.

completed associate's degrees, and 14 percent earned bachelor's degrees by 1986.

Those who completed certificate requirements within 4 years after high school. Similar patterns were found for students who completed postsecondary certificates within 4 years after high school. Ninety percent of the NLS-72 seniors who completed certificates by 1976 attained no additional degrees by 1979, 5 percent attained associate's degrees and 6 percent earned bachelor's degrees. Ninety-four percent of the 1980 seniors who attained certificates by 1984 attained no additional degrees by 1986; 1 percent attained associate's degrees and 5 percent earned bachelor's degrees.

Those who completed associate's degree requirements within 4 years after high school. Eighty-two percent and 87 percent of the NLS-72 and HS&B senior cohorts, respectively, who completed the requirements for associate's degrees within 4 years after high school, attained no additional degrees. Approximately 18 percent of the NLS-72 seniors and 13 percent of the HS&B seniors with associate's degrees within 4 years after high school completed bachelor's degrees in the subsequent 2 - 3 years.

Figure 2.--Highest degree attained as of 1986 by 1980 seniors



Group Differences in Education Attainment

Sex

The degree attainment patterns for the NLS-72 and the HS&B males and females differ (table 3).[7] NLS-72 senior males were more likely to attain some postsecondary education diploma than their female counterparts within 4 - 7 years after high school. On the other hand, HS&B 1980 and 1982 senior females were more likely than the males to attain some postsecondary diploma within 4 - 6 years after high school. The education gap between males and females has changed. 1980 females attained postsecondary certificates at rates moderately higher than males and 1972 females attained postsecondary degrees at rates moderately lower than the males.

Table 3.--Percentage of NLS-72 seniors and HS&B 1980 and 1982 seniors who earned degrees after high school, by sex

Group	Type of Attainment						
	No H.S. diploma	H.S. diploma	Certif-icate	A.A. degree	B.A./B.S. degree	M.A. degree	PH.D., LL.B,M.D.
NLS-72	3rd followup (1976)						
Male	1.34	51.47	23.37	9.29	14.51		
Female	0.64	54.78	19.26	8.98	16.31		
NLS-72	4th followup (1979)						
Male	1.14	37.29	25.97	9.60	23.26	2.72	
Female	0.55	44.45	21.22	9.77	21.68	2.30	
NLS-72	5th followup (1986)						
Male	0.98	35.28	23.57	7.84	21.99	6.51	3.79
Female	0.46	42.79	19.99	7.36	22.52	5.90	0.96
HS&B	1982 Senior 3rd followup (1986)						
Male	3.32	80.25	4.82	4.97	6.62		
Female	1.84	75.06	9.62	5.92	7.54		
HS&B	1980 Senior 2nd followup (1984)						
Male	1.50	77.29	8.99	5.87	6.33		
Female	0.98	73.10	11.37	6.80	7.73		
HS&B	1980 Senior 3rd followup (1986)						
Male	1.04	64.03	10.51	5.93	17.58	0.88	
Female	0.80	59.57	13.27	6.99	18.77	0.57	

[7] The degree attainment patterns for the NLS-72 and the HS&B males and females differ significantly (Chi Square=2338.12, df=5, p<.001).

Type of High School

Students who attended private high schools were more likely to attain some postsecondary diploma, certificate, or degree than their counterparts in public schools (table 4). Four years after high school (1976), 56.3 percent of the NLS-72 cohort attending private high schools attained a postsecondary diploma, certificate, or degree. The corresponding rate for NLS-72 public high school seniors was 45 percent. Between 1982 and 1986, 26.8 percent of the HS&B 1982 seniors in private high schools and 19 percent of those in public high school obtained some postsecondary diplomas, certificate, or degree. Similarly, 27.6 percent of the HS&B 1980 seniors attending private high schools and 23.2 percent of those attending public high school obtained a postsecondary diploma, certificate, or degree by 1984.

Table 4.--Percentages of NLS-72, HS&B 1980 seniors, and 1980 sophomores obtaining some postsecondary diploma, certificate, or degree after high school, by public and private high school attendance

Years after high school	Public high school	Private high school
NLS-72 seniors		
4 years	45.0	56.3
7 years	57.3	69.9
HS&B-1980 seniors		
4 years	23.2	27.6
6 years	35.8	48.4
HS&B-1982 seniors		
4 years	19.0	26.8

Race/ethnicity

White students were more likely to attain postsecondary diplomas or degrees than Hispanics or blacks (table 5). Among the NLS-72 seniors, 46.7 percent of whites, 42.8 percent of blacks, and 36.5 percent of Hispanics attained some postsecondary degrees by 1976. Among the HS&B 1980 seniors, 24.5 percent of whites, 19 percent of the blacks, and 18.8 percent of Hispanics attained some type of postsecondary degree by 1984. Similarly, among the HS&B 1982 seniors 21.9 percent of whites, 16 percent of blacks, and 14.9 percent of Hispanics attained type of postsecondary diploma or degree by 1986.

A comparison of the differences in the attainment of postsecondary degrees for blacks and whites across the NLS-72 and the HS&B 1980 seniors indicates that the gap between them has widened. The gap between blacks and whites in the NLS-72 cohort 4 years after high school was 4 percent. For the HS&B 1980 senior cohort 6 years after high school, the gap was 10 percent. On the other hand, the differences between Hispanics and blacks decreased while the gap between Hispanics and whites remained relatively the same, which indicates that the rate of postsecondary degree attainment blacks has diminished more than for Hispanics or whites.

Table 5.--Percentages of NLS-72 seniors, HS&B 1980 and 1982 seniors obtaining a postsecondary diploma or degree after high school

Years after high school	Race/Ethnic Group		
	Hispanic	Black	White
NLS-72 seniors			
4 years	36.5	42.8	46.7
7 years	45.9	55.6	59.1
HS&B-1980 seniors			
4 years	18.8	19.0	24.5
6 years	27.9	29.3	39.1
HS&B-1982 seniors			
4 years	14.9	16.0	21.9

Socioeconomic status

The relationship to socioeconomic status (SES)[8] was as expected. That is, those from low SES backgrounds were less likely to attain postsecondary degrees than those from high SES backgrounds (table 6). The pattern is also consistent across the NLS-72 and the HS&B sophomore and senior cohorts. The differences in postsecondary degree attainment between low and high SES were similar for the HS&B 1980 seniors within 6 years and for the NLS-72 seniors within 7 years after high school. The differences in postsecondary degree attainment for the NLS-72 and HS&B 1980 and 1982 seniors 4 years after high school are substantial. The difference between the high and low SES, 4 years after high school, indicates that SES may be less important for the early attainment of postsecondary degrees (i.e., prior to the 4-year period after high school) than for the attainment of the postsecondary degree within the customary 4-year period.

Table 6.--The percentage of NLS-72, HS&B 1980 and 1982 seniors,attaining some type of postsecondary degree after high school, by socioeconomic status

Years after high school	Socioeconomic Status	
	Low	High
NLS-72 seniors		
4 years	34.5	57.1
7 years	45.2	73.6
HS&B-1980 seniors		
4 years	17.6	30.3
6 years	24.6	54.3
HS&B-1982 seniors		
4 years	14.5	30.3

[8] Socioeconomic status is a composite variable constructed from base year and first followup data on father's occupation, father's education, mother's education, family income, and material possessions in the household. Low and high SES are the low and high SES quartile to which the respondent was classified.

Ability Quartile

The impact of ability[9] on degree attainment is as was expected from prior research. Students with high ability are more likely to attain postsecondary degrees than are students with low ability (table 7). The relationship to ability was consistent across the NLS-72 and the HS&B seniors. Like other factors reviewed here, and in prior research, the relationship is in the same direction. The impact of ability transcends the two cohorts. The differences between low and high ability were greater for HS&B 1980 and 1982 seniors than for the NLS-72 seniors.

Table 7.--Percentage of NLS-72, HS&B 1980 and 1982 seniors, attaining some postsecondary degree, by ability level

Years after high school	Ability Level	
	Low	High
NLS-72 seniors		
4 years	32.5	58.0
7 years	42.0	75.8
HS&B-1980 seniors		
4 years	16.9	31.0
6 years	21.0	57.4
HS&B-1982 seniors		
4 years	11.8	28.3

[9] Ability is a composite variable based on a battery of cognitive tests given to the 1982 seniors in 1980 and 1982 and to the 1980 seniors in 1980. A similar battery of cognitive tests was given to the NLS-72 seniors. The range of scores was divided into quartiles. Students were assigned into quartiles on the basis of their composites score.

Discussion

Comparing NLS-72 seniors with HS&B seniors shows that the levels of degree attainment has declined for the HS&B seniors. This may be associated with a variety of factors -- the end of the Vietnam conflict and the concurrent changed emphasis on education, for example, or the increased costs of postsecondary education along with the general emphasis on immediate economic returns.

Education that is attained early was also found to be a stable plateau for large percentages of students. Students reached their educational plateaus with the degree(s) they attained within the first 4 years after high school. These plateaus (i.e., high school, certificate, associate or baccalaureate level), are junctures that could be terminal, perhaps owing to there being no additional certification to maintain a job. At these junctures the individual is certified as possessing a specified amount of knowledge and skill. Although students stabilize with respect to degree attainment, they may not limit their formal education. Many students take courses to enhance their knowledge, without the intention of completing a degree.

Factors such as race/ethnicity, SES, and type of high school have a relationship to degree attainment that coincides with what may be expected on the basis of past research. Groups linked to low attainment in the past continue to be linked to low attainment. Likewise, those categories that have been linked to high attainment continue to be linked to high attainment. Educational Degree attainment by males and females has, however, changed for the NLS-72 and the HS&B 1980 and 1982 seniors. In the 1980s, the increased rate of degree attainment by females, relative to males, indicates that the opportunities for females have increased.

These findings raise many questions about the motivation to acquire additional education. On the other hand, the general decline in degree attainment by large segments of the population may indicate the emergence of a critical shortage of knowledge. On the other hand, to the extent that education is a key factor in determining the distribution of individuals among the social strata, the decreasing number of high school seniors attending college indicates that large segments of the population will be denied opportunities for success and achievement that are made available only through education.

Appendix A

Supportive Tables

Supportive Statistics for Tables 1 to 7
Attainment in the total population and for sex, race/ethnicity, socioeconomic status, ability, and type of high school *

Group	No high school diploma	High school diploma	Post-secondary certificate	Associate's	Bachelor's	Master's	Ph.d., LL.B., M.D.
	Type of degree attained						
NLS-72	3rd Followup (1976)						
Total	0.981	53.217	21.251	9.129	15.42		
se	0.188	0.708	0.528	0.376	0.512		
NLS-72	4th Followup (1979)						
Total	0.842	40.987	23.533	9.693	22.438	2.504	
se	0.182	0.754	0.551	0.378	0.543	0.187	
NLS-72	5th Followup (1986)						
Total	0.717	39.198	21.714	7.599	22.237	6.19	2.342
se	0.168	0.772	0.501	0.306	0.577	0.313	0.248
HS&B	1982 Senior 3rd Followup (1986)						
Total	2.572	77.623	7.259	5.454	7.09		
se	0.233	0.562	0.338	0.268	0.371		
HS&B	1980 Senior 2nd Followup (1984)						
Total	1.236	75.149	10.213	6.35	7.05		
se	0.186	0.604	0.442	0.347	0.389		
HS&B	1980 Senior 3rd Followup (1986)						
Total	0.92	61.752	11.929	6.472	18.196	0.727	
se	0.157	0.727	0.472	0.341	0.651	0.119	

*The percentage of students in lower degree attainment categories, such as high school diploma or associate's degree, diminished between 4 and 6 or 7 years after high school because students achieved higher level degrees.

SEX

Type of degree attained

Group	No high school diploma	High school diploma	Post-secondary certif-icate	Assoc-iate's	Bachelor's	Master's	Ph.d., LL.B., M.D.
NLS-72	3rd Followup (1976)						
Male	1.341	51.472	23.375	9.297	14.512		
se	0.362	1.067	0.821	0.526	0.693		
Female	0.64	54.787	19.269	8.986	16.316		
se	0.115	0.944	0.659	0.52	0.707		
NLS-72	4th Followup (1979)						
Male	1.14	37.291	25.973	9.607	23.267	2.72	
se	0.349	1.137	0.862	0.514	0.753	0.321	
Female	0.555	44.459	21.223	9.774	21.686	2.301	
se	0.106	0.995	0.672	0.52	0.769	0.178	
NLS-72	5th Followup (1986)						
Male	0.987	35.286	23.579	7.844	21.998	6.511	3.791
se	0.327	1.162	0.769	0.468	0.8	0.482	0.488
Female	0.461	42.79	19.993	7.363	22.521	5.901	0.968
se	.1	1.016	0.647	0.399	0.835	0.378	0.115
HS&B	1982 Senior 3rd Followup (1986)						
Male	3.32	80.257	4.826	4.97	6.624		
se	0.364	0.709	0.382	0.363	0.457		
Female	1.845	75.064	9.623	5.923	7.542		
se	0.269	0.788	0.548	0.388	0.468		
HS&B	1980 Senior 2nd Followup (1984)						
Male	1.504	77.29	8.998	5.874	6.332		
se	0.299	0.872	0.581	0.476	0.541		
Female	0.981	73.108	11.371	6.804	7.733		
se	0.221	0.843	0.653	0.477	0.528		
HS&B	1980 Senior 3rd Followup (1986)						
Male	1.044	64.033	10.516	5.931	17.587	0.886	
se	0.249	1.012	0.619	0.47	0.864	0.194	
Female	0.801	59.572	13.279	6.99	18.778	0.576	
se	0.202	0.979	0.683	0.468	0.838	0.14	

RACE ETHNICITY

Type of degree attained

Group	No high school diploma	High school diploma	Post-secondary certif-icate	Assoc-iate's	Bachelor's	Master's	Ph.d., LL.B., M.D.
NLS-72	3rd Followup (1976)						
Hispanic	4.063	59.424	25.676	6.536	4.299		
se	3.096	3.696	2.678	1.057	0.803		
Black	2.34	54.872	24.184	7.432	11.169		
se	1.221	2.589	1.796	1.578	1.96		
White	0.732	52.502	20.651	9.551	16.561		
se	0.103	0.762	0.582	0.414	0.564		
NLS-72	4th Followup (1979)						
Hispanic	3.732	50.317	27.281	8.06	10.095	0.512	
se	3.055	3.864	2.712	1.266	1.39	0.296	
Black	2.131	42.225	28.374	9.035	16.701	1.532	
se	1.187	2.747	2.041	1.599	2.107	0.434	
White	0.606	40.263	22.767	9.941	23.658	2.762	
se	0.094	0.808	0.607	0.411	0.587	0.22	
NLS-72	5th Followup (1986)						
Hispanic	3.676	49.334	25.342	7.077	10.754	2.067	1.747
se	2.89	3.691	2.509	1.176	1.404	0.578	0.517
Black	1.946	37.709	27.177	8.001	20.399	3.453	1.311
se	1.102	2.771	1.946	0.964	2.665	0.499	0.319
White	0.478	38.669	20.911	7.662	22.997	6.774	2.504
se	0.084	0.823	0.55	0.339	0.62	0.366	0.291
HS&B	1982 Senior 3rd Followup (1986)						
Hispanic	5.4	79.724	7.893	5.077	1.904		
se	1.013	1.763	1.072	1.017	0.375		
Black	4.144	79.846	9.13	3.543	3.334		
se	0.77	1.484	1.047	0.595	0.541		
White	1.785	76.952	7.053	5.928	8.279		
se	0.221	0.657	0.39	0.322	0.456		
HS&B	1980 Senior 2nd Followup (1984)						
Hispanic	2.225	78.992	9.864	7.009	1.908		
se	0.827	1.824	1.363	1.209	0.335		
Black	2.859	78.14	11.233	4.599	3.166		
se	0.762	1.225	0.999	0.487	0.558		
White	0.895	74.575	9.97	6.562	7.995		
se	0.187	0.726	0.518	0.417	0.475		

RACE ETHNICITY

Type of degree attained

Group	No high school diploma	High school diploma	Post-secondary certif-icate	Assoc-iate's	Bachelor's	Master's	Ph.d., LL.B., M.D.
HS&B	1980 Senior 3rd Followup (1986)						
Hispanic	1.735	70.192	13.837	7.3	6.798	0.135	
se	0.776	2.093	1.756	1.194	0.731	0.069	
Black	1.214	69.419	13.939	5.336	9.937	0.152	
se	0.411	1.282	1.089	0.511	0.913	0.075	
White	0.784	60.028	11.506	6.583	20.238	0.857	
se	0.175	0.864	0.549	0.411	0.771	0.15	

SES QUARTILE

Type of degree attained

Group	No high school diploma	High school diploma	Post-secondary certif-icate	Associate's	Bachelor's	Master's	Ph.d., LL.B., M.D.
NLS-72	3rd Followup (1976)						
Low	1.658	63.803	22.439	6.51	5.588		
se	0.49	1.268	1.046	0.485	0.417		
Med	0.981	53.934	22.286	10.317	12.479		
se	0.283	1.006	0.689	0.622	0.654		
High	0.363	42.53	17.139	9.148	30.818		
se	0.118	1.326	1.123	0.566	1.22		
NLS-72	4th Followup (1979)						
Low	1.422	53.411	27.09	7.961	9.079	1.034	
se	0.475	1.392	1.103	0.531	0.554	0.17	
Med	0.882	42.953	24.837	10.981	18.644	1.7	
se	0.275	1.035	0.745	0.627	0.665	0.274	
High	0.24	26.125	16.621	8.607	42.912	5.491	
se	0,1	1.389	1.103	0.533	1.252	0.426	
NLS-72	5th Followup (1986)						
Low	1.156	52.667	25.52	6.776	10.793	2.738	0.345
se	0.43	1.402	1.056	0.491	0.713	0.267	0.09
Med	0.758	41.306	23.126	8.439	20.002	4.409	1.957
se	0.257	1.07	0.697	0.503	0.781	0.32	0.433
High	0.121	21.108	14.344	6.663	38.912	13.61	5.24
se	0.062	1.3	0.929	0.458	1.291	0.972	0.444
HS&B	1982 Senior 3rd Followup (1986)						
Low	4.492	81.039	8.972	4.066	1.43		
se	0.603	1.078	0.804	0.529	0.258		
25-49%	2.934	80.2	7.617	5.52	3.727		
se	0.551	1.015	0.67	0.526	0.437		
50-75%	1.501	76.536	7.585	7.25	7.125		
se	0.313	0.993	0.619	0.587	0.62		
High	0.702	73.091	5.285	5.168	15.752		
se	0.268	1.172	0.565	0.507	1.011		

SES QUARTILE

Type of degree attained

Group	No high school diploma	High school diploma	Post-secondary certificate	Associate's	Bachelor's	Master's	Ph.d., LL.B., M.D.
HS&B	1980 Senior 2nd Followup (1984)						
Low	1.498	80.894	10.643	5.046	1.916		
se	0.31	0.951	0.79	0.522	0.308		
25-49%	0.53	77.345	11.678	7.158	3.286		
se	0.213	1.17	0.927	0.753	0.489		
50-75%	0.252	73.216	11.233	7.668	7.629		
se	0.127	1.3	0.952	0.826	0.783		
High	0.022	69.7	7.295	7.076	15.903		
se	0.016	1.303	0.762	0.765	1.107		
HS&B	1980 Senior 3rd Followup (1986)						
Low	1.185	74.133	12.314	5.502	6.641	0.222	
se	0.283	1.13	0.826	0.529	0.544	0.116	
25-49%	0.467	66.667	13.623	7.99	11.081	0.169	
se	0.209	1.304	0.962	0.765	0.927	0.104	
50-75%	0.115	58.378	12.857	7.668	20.404	0.574	
se	0.05	1.379	0.989	0.769	1.158	0.233	
High	0.007	45.703	8.698	6.288	37.136	2.165	
se	0.007	1.545	0.835	0.704	1.573	0.43	

2.

TYPE OF HIGH SCHOOL

Group	No high school diploma	High school diploma	Post-secondary certificate	Associate's	Bachelor's	Master's	Ph.d., LL.B., M.D.
			Type of degree attained				
NLS-72	3rd Followup (1976)						
Public	1.048	53.949	21.065	9.194	14.742		
se	0.21	0.743	0.535	0.409	0.499		
Private	0.319	43.336	21.183	8.404	26.756		
se	0.226	2.621	2.408	0.989	3.016		
NLS-72	4th Followup (1979)						
Public	0.892	41.821	23.497	9.684	21.643	2.46	
se	0.203	0.797	0.566	0.411	0.541	0.202	
Private	0.314	29.798	20.974	9.488	35.974	3.448	
se	0.222	2.636	2.343	1.008	3.084	0.635	
NLS-72	5th Followup (1986)						
Public	0.766	40.072	21.668	7.719	21.772	5.858	2.141
se	0.188	0.817	0.511	0.333	0.599	0.303	0.263
Private	0.308	26.213	20.032	6.216	31.1	11.048	5.08
se	0.217	2.725	2.247	0.805	2.771	1.918	1.041
HS&B	1982 Senior 3rd Followup (1986)						
Public	2.834	78.155	7.392	5.402	6.215		
se	0.258	0.585	0.364	0.29	0.331		
Private	0.263	72.942	6.089	5.912	14.791		
se	0.197	1.917	0.847	0.625	2.062		
HS&B	1980 Senior 2nd Followup (1984)						
Public	1.374	75.451	10.438	6.4	6.335		
se	0.206	0.63	0.463	0.365	0.38		
Private	0	72.445	8.198	5.902	13.453		
se	0	2.038	1.464	1.115	1.711		
HS&B	1980 Senior 3rd Followup (1986)						
Public	1.023	63.175	12.116	6.575	16.423	0.685	
se	0.174	0.753	0.498	0.359	0.637	0.123	
Private	0.075	51.535	9.956	6.573	30.863	0.995	
se	0.075	1.417	0.832	0.707	1.27	0.263	

ABILITY QUARTILE

Type of degree attained

Group	No high school diploma	High school diploma	Post-secondary certif-icate	Assoc-iate's	Bachelor's	Master's	Ph.d., LL.B., M.D.
NLS-72	3rd Followup (1976)						
Low	1.426	66.101	25.645	4.632	2.194		
se	0.3	1.506	1.273	0.488	0.629		
Med	0.776	54.258	22.127	12.321	10.516		
se	0.398	1.152	0.862	0.777	0.677		
High	0.17	41.825	15.364	9.101	33.538		
se	0.089	1.4	1.165	0.651	1.266		
NLS-72	4th Followup (1979)						
Low	1.185	56.44	30.392	7.004	4.706	0.27	
se	0.271	1.717	1.394	0.616	0.674	0.102	
Med	0.69	43.044	23.953	12.72	18.532	1.058	
se	0.39	1.233	0.903	0.77	0.8	0.156	
High	0.139	24.06	16.072	8.389	44.975	6.362	
se	0.083	1.393	1.159	0.618	1.322	0.487	
NLS-72	4th Followup (1986)						
Low	0.903	57.683	27.266	6.039	7.036	0.97	0.1
se	0.21	1.706	1.317	0.552	0.874	0.178	0.056
Med	0.589	39.71	22.726	9.282	21.723	4.707	1.259
se	0.366	1.225	0.861	0.502	0.953	0.545	0.48
High	0.086	20.497	13.495	6.378	38.753	13.997	6.79
se	0.066	1.461	0.951	0.668	1.323	0.862	0.83
HS&B	1982 Senior 3rd Follow-up (1986)						
Low	6.346	81.836	8.232	2.955	0.628		
se	0.722	1.201	0.831	0.49	0.205		
25-49%	2.183	81.422	9.077	5.402	1.914		
se	0.364	1.03	0.758	0.577	0.311		
50-75%	1.491	76.864	8.015	8.259	5.368		
se	0.401	1.028	0.654	0.633	0.494		
High	0.305	71.437	4.305	4.985	18.965		
se	0.134	1.142	0.515	0.443	1.024		

ABILITY QUARTILE

Type of degree attained

Group	No high school diploma	High school diploma	Post-secondary certif-icate	Assoc-iate's	Bachelor's	Master's	Ph.d., LL.B., M.D.
HS&B	1980 Senior 2nd Follow-up (1984)						
Low	1.72	81.339	11.775	4.264	0.899		
se	0.361	1.105	0.919	0.531	0.268		
25-49%	0.37	77.528	11.598	6.133	4.369		
se	0.168	1.257	0.966	0.711	0.622		
50-75%	0.019	73.074	10.649	9.025	7.231		
se	0.016	1.383	0.962	0.912	0.756		
High	0	69.056	7.68	7.304	15.958		
se	0	1.337	0.791	0.807	1.068		
HS&B	1980 Senior 3rd Follow-up (1986)						
Low	1.442	77.493	13.271	4.816	2.943	0.032	
se	0.347	1.182	0.937	0.549	0.447	0.024	
25-49%	0.227	67.509	13.977	6.825	11.198	0.261	
se	0.123	1.447	1.033	0.76	0.915	0.166	
50-75%	0.003	57.604	12.921	8.988	19.822	0.659	
se	0.003	1.489	1.052	0.92	1.163	0.242	
High	0	42.533	7.789	6.542	41.219	1.914	
se	0	1.476	0.774	0.747	1.465	0.413	

Appendix B

Technical Notes

Methodology and Technical Notes

Data Source

The estimates in this bulletin were based on longitudinal data from the National Longitudinal Study of the High School Class of 1972 baseyear through fifth followup and the High School and Beyond sophomore and senior cohort responses for the baseyear through the third followup. A comprehensive description of these data are provided in *High School and Beyond 1980 Sophomore Third Followup (1986) Data File User's Manual* (National Center for Education Statistics, 1987; *High School and Beyond 1980 Senior Third Followup (1986) Data File User's Manual* (National Center for Education Statistics); and *National Longitudinal Study of the High School Class of 1972 (NLS-72) Fifth Followup Data File User's Manual* (National Center for Education Statistics, 1987. Briefly, the National Longitudinal Study of 1972 and High School and Beyond are longitudinal studies of the 1972 senior and 1980 sophomore and senior cohorts. NLS-72 included a base year and five followup surveys and HS&B included a base year and three followup surveys. The months and years they were undertaken is given below.

Timing of Data Collection for NLS-72 and HS&B 1980 and 1982 Seniors

	NLS-72 seniors	HS&B 1980 seniors	HS&B 1982 seniors
Base year			
Months	April-June	February----------June	
Year	1972	1980	
First followup			
Months	October-May	February----------Mid-July	
Year	1973-1974	1982	
Second followup			
Months	October-May	February----------End of July	
Year	1974-1975	1984	
Third followup			
Months	October-May	February----------September	
Year	1976-1977	1986	
Fourth followup			
Months	October-May		
Year	1979-1980		
Fifth followup			
Months	March-September		
Year	1986		

The estimates in this bulletin were based on data from 12,841 NLS-72 se seniors, 10,569 HS&B seniors, and 11,443 HS&B sophomores who were senior in 1982. The sophomores who "dropped out" of high school between the sophomore and the senior year were excluded from this analysis for the purposes of comparability between the three groups. The stratified, telescoping sampling procedures and the questionnaires used to collect these data are fully described in the user's manual.

Statements concerning differences included in this bulletin were tested using Chi Square and Students' t-tests. Students' t-tests incorporated the estimated differences and the standard errors of the estimates. The standard errors calculated using Taylor residual procedures, reflect the variability in the estimates due to sampling. Unless otherwise noted, all of the differences were significant at a 99 percent level of confidence. Estimated standard errors for all the estimates are included in the supporting tables. To compare two estimates, p_1 and p_2, compute the Students' t-value as:

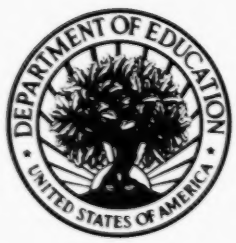
$$t = (p_1 - p_2) / \text{Sqrt}[(se_1)^2 + (se_2)^2]$$

The critical values (i.e., 1.65 for 90 percent confidence, 1.96 for 95 percent, and 2.58 for 99 percent confidence) are relatively conservative due to the longitudinal nature of the data.

The estimates were also subject to nonsampling error such as nonresponse, difference in the interpretation of the meaning of the questions by the respondents, differences related to the particular time the survey was conducted, and errors in data collection and participation. These errors can sometimes bias the estimates. This nonsampling errors is not easy to measure. The discontinuities in the degree attainment patterns shown for 1980 seniors between 1984 and 1986 probably reflect errors associated with the timing of the followup surveys.

For More Information

For more information about the estimates or the NLS-72 or HS&B longitudinal studies, contact Carl Schmitt, National Center for Education Statistics, 555 New Jersey Avenue NW, Washington, DC 20208-1310, telephone (202) 357-6772.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